

VERSION WITH MARKINGS TO SHOW CHANGES

IN THE SPECIFICATION:

Page 5, amend the paragraph beginning on line 10 to read as follows:

- performing on the same sample a second thermogram in the same range and under a pressure Ph of a hydrocarbon gas, T1 being a temperature low enough to obtain the formation of hydrates in the sample at a gas pressure Ph, ~~P2~~T2 being high enough to obtain hydrate dissociation,

IN THE CLAIMS:

1. (Amended) A method for determining gas hydrate formation conditions in a well fluid, comprising the following stages :

- taking a fluid sample,
- placing this sample in a calorimetry cell,
- performing on this sample a reference thermogram in a temperature range between T1 and T2,
- performing on the same sample a second thermogram in the same range and under a pressure Ph of a hydrocarbon gas, T1 being a temperature low enough to obtain the formation of hydrocarbon gas hydrates in the sample at a gas pressure Ph, ~~P2~~T2 being high enough to obtain hydrate dissociation,
- identifying a peak in the second thermogram corresponding to the hydrocarbon gas hydrates dissociation zone and deducing therefrom a hydrocarbon gas hydrates

dissociation temperature,

- determining the hydrocarbon gas hydrate formation conditions for the fluid considered.

2. (Amended) A method as claimed in claim 1, wherein pressure  $P_h$  is determined as a function of the pressure of the well fluid close to the zones where the appearance of hydrocarbon gas hydrates is critical.

IN THE ABSTRACT:

Method of determining the gas hydrate formation conditions in a well fluid, comprising the following stages :

- taking a fluid sample,
- placing this sample in a calorimetry cell,
- performing on this sample a reference thermogram in a temperature range between  $T_1$  and  $T_2$ ,
- performing on the same sample a second thermogram in the same range and under a pressure  $P_h$  of a hydrocarbon gas,  $T_1$  being a temperature low enough to obtain the formation of hydrates in the sample at a gas pressure  $P_h$ ,  $P_2$ - $T_2$  being high enough to obtain hydrate dissociation,

identifying a peak in the second thermogram corresponding to the hydrates dissociation zone and deducing therefrom a hydrates dissociation temperature.